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Nippon Shinyaku and FRONTEO Launch Co-Creation Project to Evaluate Drug Discovery Seeds

Kyoto, Japan, December 23, 2025 - Nippon Shinyaku Co., Ltd. (Nippon Shinyaku; Headquarters, Kyoto; President, Toru Nakai) announced that Nippon Shinyaku and FRONTEO, Inc. (FRONTEO; Headquarters, Tokyo, Chief Executive Officer, Takahiro Morimoto) have launched a co-creation project aimed at discovering the therapeutic targets for rare diseases.

In recent years, the diversification and increasing complexity of target diseases in pharmaceutical R&D have created a need to identify highly novel target molecules. Furthermore, a gap between biological validation using cells and animals and AI-driven data analysis has hindered improvements in R&D speed and success rates.
Through this project, we will focus on rare and intractable diseases, combining FRONTEO's hypothesis-driven AI drug discovery support service, "Drug Discovery AI Factory (DDAIF)," with Nippon Shinyaku's extensive expertise. By leveraging these strengths, we aim to accelerate research and development toward creating first-in-class drugs.

Comment from Nippon Shinyaku Director of Research & Development, Keiichi Kuwano

"To realize our long-term vision for 2035—'A global healthcare company from Kyoto creating various types of new ways of life for each person around the world'—we are actively promoting the use of AI technology in drug discovery research. FRONTEO's DDAIF is a groundbreaking technology that revolutionizes target identification, the most critical step in drug discovery, and we expect it to contribute significantly to the goals outlined in our mid-term business plan, such as accelerating R&D and continuously expanding our pipeline. Through this project, we will create new value in therapeutic areas where no treatments currently exist and help people lead healthier, happier lives."

Comment from FRONTEO Director/CSO, Hiroyoshi Toyoshiba

"We are truly delighted to collaborate with Nippon Shinyaku, a company that has consistently delivered innovative medicines to address unmet medical needs, at the forefront of AI-driven drug discovery. FRONTEO's DDAIF is operated by a team of drug discovery researchers and AI engineers working in close collaboration, enabling the

identification of new targets and the generation of hypotheses from vast volumes of information. By combining Nippon Shinyaku's deep expertise in drug discovery with our advanced AI technology, we aim to enhance the success rate and efficiency of drug development and contribute to the discovery of novel targets."

About FRONTEO Drug Discovery AI Factory（DDAIF）

FRONTEO Drug Discovery AI Factory (DDAIF) is an AI drug discovery support service that combines KIBIT, an AI specialized in natural language processing (patented in Japan and the U.S.), with the expertise of FRONTEO's drug discovery researchers and AI engineers. By analyzing disease-related gene networks and building hypotheses about target candidates, DDAIF provides powerful support for researchers' decision-making in drug development.

This service has already been adopted by several major pharmaceutical companies and has a proven track record.

For more information, see https://lifescience.fronteousa.com/products/drug-discovery-ai-factory/

About Nippon Shinyaku

Based on Nippon Shinyaku's business philosophy, "Helping people lead healthier, happier lives," we aim to be an organization trusted by the community through creating unique medicines that will bring hope to patients and families suffering from illness. Please visit our website (https://www.nippon-shinyaku.co.jp/english/ for products or detailed information.

About FRONTEO

FRONTEO provides its proprietary specialized AI"KIBIT" to support expert judgment across domains confronting social challenges. Its unique natural language processing technology (patented in Japan, the U.S., and Europe) enables fast, high precision analysis without reliance on training data volume or computational power. Additionally, patented technology that maps (visualizes structure) analyzed information allows KIBIT to directly influence expert insights, and in recent years, KIBIT has been applied in hypothesis generation and target discovery for drug development.

For more information, see https://www.fronteo.com/en/

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